

Appendix 4.12 Constraints of Proposed Mitigation Measures

NAP ID	Road Traffic Noise Criteria, dB(A)	Noise Level in Unmitigated Scenario (Maximum), dB(A)	Noise Level in Mitigated Scenario (Maximum), dB(A)	Constraints of Proposed Mitigation Measures (Noise Barrier)								Proposed Vertical Noise Barrier (with height)	Chainage
				Constraints in Erecting Noise Barrier									
				a	b	d	e	f	g	h			
N01	65	74.2	74.2									Out of Works Scope	
N02	70	64.3	64.2									N/A	
N03	70	72.4	67.6									4 m vertical (reflective) noise barrier (NB1)	CHA 1+25.00 to CHA 1+85.00
N04	70	71.7	68.9									5 m vertical (reflective) noise barrier (NB2)	CHA 2+00.00 to CHA 2+35.00
N05	70	74.9	74.0	✓									
N06	70	80.7	78.5	✓									
N07	70	79.0	76.8								✓		
N08	70	73.2	71.9	✓						✓			
N09a	70	72.9	71.6									5 m vertical (reflective) noise barrier (NB12)	CHA 7+40.00 to CHA 7+65.00
N09b	70	74.0	72.3									5 m vertical (reflective) noise barrier (NB12)	CHA 7+40.00 to CHA 7+65.00
N10	70	69.2	68.7									N/A	
N11	70	79.9	77.9								✓		
N12	70	75.4	71.2									5 m vertical (reflective) noise barrier (NB17)	CHA 12+20.00 to CHA 12+50.00
N13	70	76.7	71.6									5 m vertical (reflective) noise barrier (NB18)	CHA 12+60.00 to CHA 13+05.00
N14	70	77.3	75.8							✓			
N15	70	80.9	78.7	✓									
N16	70	75.8	73.6							✓			
N17	70	80.9	78.5							✓			
N18	70	76.1	74.3							✓			
N19	70	71.2	70.6	✓									
N20	70	74.5	72.4							✓			
N21	70	78.0	75.1									5 m vertical (reflective) noise barrier (NB37)	CHB 20+20.00 to CHB 20+45.00
N22	70	77.2	76.3	✓						✓		5 m vertical (reflective) noise barrier (NB39)	CHB 20+70.00 to CHB 21+05.00
N23	70	73.1	70.9							✓			
N24	70	77.6	75.7		✓								
N25	70	77.9	75.8							✓			
N26	70	76.5	74.4	✓									
N27	70	72.1	69.6									5 m vertical (absorptive) noise barrier (NB52)	CHB 23+95.00 to CHB 24+35.00
N28	70	76.7	75.4									5 m vertical (absorptive) noise barrier (NB54)	CHB 24+40.00 to CHB 24+80.00
N29	70	74.1	71.4									5 m vertical (absorptive) noise barrier (NB55)	CHB 24+80.00 to CHB 25+32.00
N30	70	76.5	70.7									5 m vertical (absorptive) noise barrier (NB56)	CHB 24+85.00 to CHB 25+20.00
N31	70	74.6	70.4									5 m vertical (absorptive) noise barrier (NB55)	CHB 24+80.00 to CHB 25+32.00
N32	70	76.1	75.5							✓			
N33	70	75.0	73.4	✓									
N34	70	74.7	72.4							✓			
N35	70	74.3	72.6							✓			
N36	70	75.0	72.2									5 m vertical (absorptive) noise barrier (NB72)	CHB 32+25.00 to CHB 32+55.00
N37	70	74.9	73.5	✓						✓			
N38	70	73.5	71.0	✓						✓			
N39	70	82.1	79.8	✓						✓			
N40	70	77.8	76.6	✓									
N41	70	78.5	77.0	✓						✓			
N42	70	77.0	76.0	✓									
N43	70	76.1	75.9									Out of Works Scope	
N44	70	76.0	66.8									5 m vertical (reflective) noise barrier (NB92)	CHB 38+30.00 to CHB 39+65.00
N45	70	74.9	66.0									5 m vertical (reflective) noise barrier (NB92)	CHB 38+30.00 to CHB 39+65.00
N46	70	74.6	73.7									5 m vertical (reflective) noise barrier (NB94)	CHB 39+45.00 to CHB 39+70.00
N47	70	69.4	69.1									Out of Works Scope	
N48	70	66.6	66.5									Out of Works Scope	
N49	70	65.8	65.7									N/A	
N50	70	67.8	67.7									N/A	
N51	70	69.6	69.7							✓			
N52	70	68.7	68.7									N/A	
N53	70	67.9	67.9									N/A	
N54	70	72.1	70.3									3 m vertical (absorptive) noise barrier (NB116)	CHB 49+20.00 to CHB 49+75.00
N55	70	74.9	70.3									3 m vertical (absorptive) noise barrier (NB114)	CHB 49+60.00 to CHB 50+00.00
N56	N/A	N/A	N/A									N/A	
N57	70	73.5	73.5									Out of Works Scope	

GENERAL
 1. Out of Works Scope
 2. N/A as the predicted noise level under unmitigated scenario complied with the noise criteria
 List of Constraints (NB)
 (a) no blockage on access (engineering constraints as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (b) effective height to length ratio should be maintained at 1:5 (acoustic effectiveness as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (c) obstruct emergency access or firefighting (fire safety consideration as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (d) undermine road safety or impede pedestrian and vehicular movements (sightline & road safety considerations as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (e) interfere with commercial activities or cause social disruptions / resident objection (public objections as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (f) engineering constraint e.g. affecting existing buildings/structures (engineering constraints as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
 (g) impossibility of land resumption for constructing noise barriers (public objections as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)

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				Constraints in Erecting Noise Barrier									
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P01	70	80.0	80.0									Out of Works Scope	
P02	70	74.9	74.9									Out of Works Scope	
P03	70	78.5	78.5	✓									
P04	70	79.7	79.7									Out of Works Scope	
P05	70	82.2	80.0	✓									
P06	70	82.3	79.9	✓									
P07	70	76.5	76.4						✓				
P08	70	80.0	79.8						✓				
P09	70	82.3	79.8	✓					✓				
P10	70	79.8	79.8	✓									
P11	70	82.0	81.9						✓				
P12	70	79.4	77.5									5 m vertical (absorptive) noise barrier (NB72)	CHB 32+30.00 to CHB 32+55.00
P13	70	82.2	79.9	✓									
P14	70	82.2	77.0									5 m vertical (reflective) noise barrier (NB92)	CHB 38+30.00 to CHB 39+65.00

GENERAL
 1. Out of Works Scope
 2. N/A as the predicted noise level under unmitigated scenario complied with the noise criteria

List of Constraints (NB)
 (a) no blockage on access (engineering constraints as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)
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 (g) impossibility of land resumption for constructing noise barriers (public objections as given in cl.4.7.11 of EIAO Guidance Note No. 12/2010)